Total Maximum Daily Load (TMDL) Program Status Report

February 2005

Overview

Over the next sixteen months we will be asking the Board to consider adopting Basin Plan amendments to formally establish seven Total Management Daily Loads (TMDLs): Tomales Bay Watershed Pathogens, San Francisco Bay Urban Creeks Diazinon and Pesticide-Related Toxicity Water Quality Attainment Strategy and TMDL, San Francisco Bay PCBs, Napa River Pathogens, Sonoma Creek Pathogens, Walker Creek Mercury, and Napa River Sediments. The current schedule for these seven TMDLs in shown in Table One at the end of this document. Our objective is to ensure that TMDL efforts result in tangible water quality improvements in the shortest possible time with the goal of restoring affected waters and maintaining water quality standards in those waters.

These seven projects, combined with the San Francisco Bay Mercury TMDL adopted in 2004 and the delisting of the South Bay as impaired by copper and nickel, address about one-third of the 270 impaired water quality listings in our Region. In addition, nine TMDL projects are scheduled for completion by 2008. These address over 50 listings and include three efforts supported by the Clean Estuary Partnership: San Francisco Bay Legacy Pesticides, San Francisco Bay Diazinon and Pesticide Toxicity, and San Francisco Bay Selenium. Other active projects include sediment TMDLs for Lagunitas Creek, San Francisquito Creek, Sonoma Creek, and Walker Creek; nutrient TMDLs for Sonoma Creek and Napa River; and the Guadalupe River Watershed Mercury TMDL.

The TMDL Development Process

As background, the federal Clean Water Act requires states to identify impaired waters and the pollutants causing those impairments. This list of water bodies is often referred to as the "303(d) list" (referencing the requirement in section 303(d) of the Clean Water Act). The Clean Water Act requires that states establish Total Maximum Daily Loads (TMDLs) for the listed pollutants causing the impairments. TMDLs are essentially cleanup or restoration plans for a water body that target the specific pollutants causing the impairment of the listed water body. Essential components of TMDLs include: numeric target(s) that define the desired condition of the water body; the maximum amount of pollutant(s) or stressor(s) the water body can tolerate while meeting these targets; identification of the sources of the pollutant(s) reaching the water body; and allocations of pollutant loads or load reduction responsibility to these sources.

TMDLs are established via amendments to our Basin Plan, and these amendments must also include plans to implement the TMDLs. Implementation plans describe necessary pollution prevention, control, and restoration actions necessary to restore the water body and/or remove the impairment. They identify responsible parties and schedules for actions, and specify monitoring to track the actions and attainment of water quality standards in the water body. They may also specify studies needed to confirm key assumptions made while developing the TMDL, resolve any uncertainties remaining when the TMDL was adopted, and establish a process for revising the TMDL, as necessary, in the future.

We use a phased approach to develop TMDLs. Early phases involve identifying key issues concerning the cause of the impairment and the information needed to understand how to resolve the impairment, meeting with stakeholders—both those causing and affected by the impairment—and conducting studies and analyses. The timeline and level of effort, which we identify in a project plan, depend on staff and contract resources, available data, and the complexity of the impairment problem.

We next develop a project report that reflects the results of these efforts and describes the water quality problem causing the impairment, sources of the pollutant reaching the impaired water body, and potential actions needed to restore or clean up the water body. A key task during this phase is to meet with stakeholders and solicit input on appropriate regulatory options.

The success of any TMDL is dependent on successful implementation. As such, developing permit options and working with other agencies and divisions within the Water Board to determine the most efficient and effective way to integrate needed corrective actions into existing programs are high priority tasks.

The last step before Board action is the formal public notice and comment phase. We typically schedule two hearings for each TMDL project. The first, a testimony hearing, serves as an opportunity for interested parties to comment on the proposed Basin Plan amendment and associated implementation plan, and for Board members to ask questions of staff and stakeholders. At the second, the adoption hearing, the Board is asked to consider comments and staff responses and establish the TMDL by adopting the proposed Basin Plan amendment. Once adopted by the Board, the TMDL is sent for approval to the State Water Board, the California Office of Administrative Law, and the U.S. Enivronmental Protection Agency (U.S. EPA).

Throughout the process of developing TMDLs, we look for all opportunities to implement appropriate actions that are likely to help address the causes of water body impairments, even before the TMDL is effective. These early actions give us both a head start in restoring listing water bodies and in evaluating whether the selected actions are as effective as anticipated. Examples of such early actions include implementation of pollution prevention efforts targeted at a specific pollutant or the requirement of control measures likely to reduce new discharges of a pollutant to a water body (e.g., the requirement for stormwater programs to implement updated new and redevelopment performance standards).

Stakeholder participation is essential for successful TMDLs. Stakeholder buy-in helps create TMDLs that are real solutions to real problems. Each of our TMDL projects has a stakeholder involvement process tailored to reflect opportunities, challenges, and stakeholders' interests. The Clean Estuary Partnership, a collaborative effort between Board staff and the wastewater and urban runoff management agencies (specifically, the Bay Area Clean Water Agencies and the Bay Area Stormwater Management Agencies Association) is funding critical scientific studies and providing a forum for resolving issues to augment and enhance our San Francisco Bay TMDLs.

Our TMDL Web site (www.waterboards.ca.gov/sanfranciscobay/tmdlmain.htm) contains a list of active TMDL projects, TMDL work products, and forthcoming meetings and workshops.

A Preview of Forthcoming TMDLs

Tomales Bay Watershed Pathogens

The goal of the Tomales Bay Watershed Pathogens TMDL is to minimize human exposure to disease-causing pathogens. Tomales Bay supports one of the few remaining commercial shellfish growing areas on the west coast, and the TMDL focuses on protecting shellfish consumers while balancing the desire to sustain agriculture in the watershed. Early actions are already underway. We are working closely with the County of Marin to improve its septic tank program; inspecting all regulated facilities; working closely with the National Park Service to better manage rangeland, dairies, and recreational uses; implementing our dairy waste management program; and developing a mechanism to track and improve rangeland management.

SF Bay Urban Creeks Diazinon and Pesticide-Related Toxicity

The goal of San Francisco Bay Urban Creeks Diazinon and Pesticide-Related Toxicity Water Quality Attainment Strategy and TMDL is to reduce pesticide-related toxicity and protect aquatic life in all urban creeks. This effort is aimed not only at eliminating existing sources of

such toxicity, but also preventing such toxicity in urban creeks from occurring in the future. We are currently involved in an extensive stakeholder effort to get feedback on draft Basin Plan language. Many of the urban runoff programs are already implementing large portions of the implementation plan. A key challenge is to better coordinate how the California Department of Pesticide Regulation, U.S. EPA, and the Water Board regulate pesticides and water quality.

San Francisco Bay PCBs

The goal of the San Francisco Bay PCBs TMDL is to reduce PCBs in aquatic life so that humans and wildlife can safely consume fish. Sources of concern include in-Bay hotspots and urban runoff. We are fortunate to have both the Regional Monitoring Program and the Clean Estuary Partnership to assist us in developing the scientific basis of the TMDL and evaluating implementation alternatives. We are currently getting input from the various stakeholders as we draft Basin Plan language to establish and implement the TMDL. Two projects, funded by Proposition 13, are underway to determine feasible actions to reduce PCBs in urban runoff.

Napa River and Sonoma Creek Pathogens

The goal of the Napa River and Sonoma Creek Pathogens TMDLs is to minimize human exposure to disease-causing pathogens. These TMDLs focus on protecting recreational water uses (fishing, swimming, boating). We recently confirmed that septic tanks and urban runoff are key pathogen contributors in these watersheds, and livestock and grazing are localized sources. We will meet with stakeholders to discuss our findings and implementation alternatives.

Walker Creek Mercury

The goal of the Walker Creek (Marin County) Mercury TMDL is to reduce mercury in aquatic life so that humans and wildlife can safely consume fish. Early action on this TMDL began in 1998 when the Board, using funds from the state's cleanup and abatement account, partnered with U.S. EPA to cleanup the Gambonini mercury mine. Recent monitoring suggests that mercury loads from the mine site have decreased by 75% as a result of cleanup efforts. The Board and the public will be invited to attend a site tour this spring. A remaining implementation challenge for this TMDL is to address legacy mine wastes downstream of the mine site.

Napa River Sediment

The overall goal of the Napa River Sediment TMDL project is to reduce sediment discharges and enhance and restore native fish populations in the Napa River Watershed. A key challenge in developing sediment TMDLs is distinguishing between naturally occurring and controllable sediment discharges. This project confirmed that sediment discharges in the Napa River Watershed are linked to a decline in steelhead and salmon populations. Sediment discharges are degrading steelhead-spawning gravels in the upper watershed and salmon spawning and juvenile rearing habitat in the lower watershed. Land uses that may increase erosion, such as dirt roads, vineyards, and grazing, and actions that cause the Watershed creek channels to erode their bed and banks are considered controllable and will be addressed by the TMDL. We are setting up meetings to discuss these results and implementation alternatives with stakeholders in the Watershed.

Table 1
San Francisco Bay Region TMDLs Scheduled for Completion by June 2006

TMDL Project	Project Report	Testimony Hearing	Adoption Hearing
Tomales Bay Watershed Pathogens	Completed March 2004	April 2005	June 2005
SF Bay Urban Creeks Diazinon and Pesticide-Related Toxicity	Completed March 2004	August 2005	October 2005
SF Bay PCBs	Completed January 2004	January 2006	March 2006
Napa River Pathogens	May 2005	February 2006	April 2006
Sonoma Creek Pathogens	May 2005	February 2006	April 2006
Walker Creek Mercury	June 2005	March 2006	May 2006
Napa River Sediment	April 2005	April 2006	June 2006